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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 10/042,749 | 12/04/2002 | Surjit A. Chadha | 100718.409/MIC-54CN/DV1 | 1559 |
| 23483 | 7590 | 05/25/2004 | EXAMINER | |
| HALE AND DORR, LLP 60 STATE STREET BOSTON, MA 02109 | | | SANTIAGO, MARICELI | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2879 | |

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/042,749 | CHADHA ET AL. | |
| | Examiner | Art Unit | |
| | Mariceli Santiago | 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 15, 16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 13, 14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The Amendment, filed on February 13, 2004, has been entered and acknowledged by the Examiner.

Cancellation of claims 1-9 and 11-12 has been entered.

Claims 10 and 13-21 are pending in the instant application.

Claim Objections

Claims 14, 16, 17 and 19 are objected for the following reasons:

Claim 14, it appears that the recitation "poly(propylene carbonate)" is repeated twice in line 2.

Claims 16 and 19 recite "the glass screen", the recitation is objectionable since the same element was previously recited as "a screen" without particularly defining it as being made from glass.

Claim 17, "organomettalic" should read --organometallic--.

Claim 17 recites "zinc (Zn)." In line 3, the presence of the period is objectionable, since periods should only be used at the end of a claim or when abbreviating words.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 13-17 recite "selected from the group including", the transitional phrase "including", also regarded as comprising, is considered to be open-ended, as such, it is improper to use the term "including" instead of "consisting of" when reciting a Markush group. *Ex parte Dotter*, 12 USPQ 382 (Bd. App. 1931).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 15, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Speigel et al. (US 3,763,051).

Regarding claims 10, 15, 18 and 19, Speigel discloses a method of coating anode segments of an evacuated display device, the method comprising the steps of providing a screen provided with the anode segments (not illustrated, Column 2, lines 22-25), and simultaneously applying a phosphor material and a binder on the anode segments, and heating the binder to bind the phosphor particles to each other and to the anode segments, the binder material comprising a conductive material, i.e., binder made of polyvinyl alcohol and potassium silicate (Column 1, lines 30-48).

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Claims 10, 16, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Danh et al. (US 5,536,383).

Regarding claim 10, Van Danh discloses a method of forming an improved field emission display device, comprising the steps of providing a screen (5) and simultaneously applying a phosphor material (18) and a binder on the screen, the binder material holding the phosphor material to the screen, the binder material comprising a conductive material (Column 3, lines 12-27).

Regarding claim 16, Van Danh discloses a method wherein the glass screen is coated with transparent conducting film of indium tin oxide (Column 4, lines 1-5).

Regarding claims 20-21, Van Danh discloses a method of forming a field emission display device, comprising providing a faceplate (5) comprising a transparent screen having at least one side, applying a transparent conductor (15) to the side of the screen, simultaneously applying a layer of phosphor and conductive/semiconductive binder material to the transparent conductor, the binder material holding the phosphor to the transparent conductor (Column 3, lines 12-27), providing a baseplate comprising, a base electrode (18), a plurality of conical field emission cathodes (1c) having a base and a tip, the bases of the field emission cathode being disposed on the base electrode (18), and a grid electrode (1a) disposed proximal the tips of the field emission cathodes, positioning the baseplate proximal the side of the screen so that the baseplate is spaced apart from the faceplate (Fig. 2), and providing a vacuum gap between the faceplate and the baseplate.

Response to Arguments

Applicant's arguments with respect to claims 10 and 13-21 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 13, 14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 13, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 13, and specifically comprising the limitation of the binder material selected from the group consisting of tin(II) 2-ethylhexanoate, tin(IV) isopropoxide, tin(II) oxalate, titanium (IV) ethoxide, zinc 2,4-pentane dionate, zinc acetate, and zinc oxalate.

Regarding claim 14, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 14, and specifically comprising the limitation of the binder material selected from the group consisting of poly(propylene carbonate), and poly(ethylene carbonate).

Regarding claim 17, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 15, and specifically comprising the limitation of the binder material is an organometallic compound selected from the group consisting of cadmium (Cd), titanium (Ti), zinc (Zn), tin (Sn), antimony (Sb), tungsten (W), niobium (Nb).

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

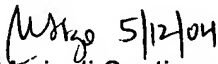
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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

 5/12/04
Mariceli Santiago
Patent Examiner
Art Unit 2879


VIP PATEL
PRIMARY EXAMINER